

Work Order ID 151898

Friday, October 14, 2016 1:54:53 PM

151898

Page 1

Item ID: D3628-1

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Washer, Cupped

Start Date: 9/27/2016 Start Qty: 250.00

250

Cust Item ID:

Required Date: 10/14/2016 Req'd Qty: 250.00

250

Customer:

Reference:

Approvals:

Process Plan: VS/

DAS
21
9-89

Date: 10/14/18

Tooling:

Date:

Run Start *NR1*

QC:

Date:

SPC (Y/N):

Date:

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D3628	C								

100

0.00

100

PURCHASING

Purchasing

Memo

0.00

Purchasing

Issue P/O: 34013

Email or Ship DXF file to vendor

Laser Cut D3628-1 flat pattern and form as per Dwg D3628

Possible Supplier: GFI

Material release note is required

500

OCT 20 2016

DAS
13
9-89

110

Receive & Inspect for Damage & Mat'l Certs

0.00

110

Packaging

Memo

0.83

Packaging

Ensure material certification is attached

500 8/16-12-1

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

Work Order ID 151898

Friday, October 14, 2016 1:54:53 PM

151898

Page 2

Item ID: D3628-1 Accept *N900040100* Setup Start *NS1*
 Revision ID: Stop *NS2*
 Item Name: Washer, Cupped
 Start Date: 9/27/2016 Start Qty: 250.00 *250* Cust Item ID:
 Required Date: 10/14/2016 Req'd Qty: 250.00 *250* Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start *NR1*
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120	QC6- Inspect dimensions to drawing	0.00							DAS 38 9-89
120						500			
QC	Memo	0.00							
Quality Control									JAN 25 2017
130	Identify as per dwg & Stock Location: <i>St 046</i>	0.00							
130									
Packaging	Memo	0.42				500			DAS 6 9-89
Packaging									JAN 28 2017
140	QC21- Final Inspection - Work Order Release	0.00							
140									
QC	Memo	4.17							
Quality Control									17/01/30 <i>MF</i> 17-1-30

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
		OTHER : ☐			

Picklist Print

Friday, October 14, 2016 1:54:53 PM

Page 1

Work Order ID: 151898

151898

Parent Item: D3628-1

D3628-1

Parent Item Name: Washer, Cupped

Start Date: 9/27/2016

Required Date: 10/14/2016

Start Qty: 250.00

Required Qty: 250.00

Comments: IPP Rev:A New Issue 07-05-28 JLM
IPP Rev:B Removed Powder 07-07-11 JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D3628-1P		Purchased		No		110	Each	0.0000	1	250			
D3628-1P									**				
Cupped Washer													

500x
8/16-12-1

DQA: _____ Date: _____

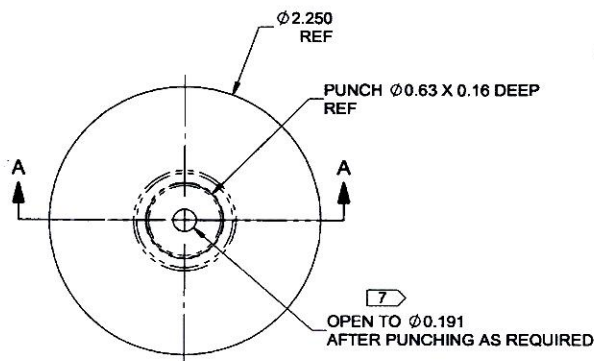


WORK ORDER NON-CONFORMANCE / UPDATE

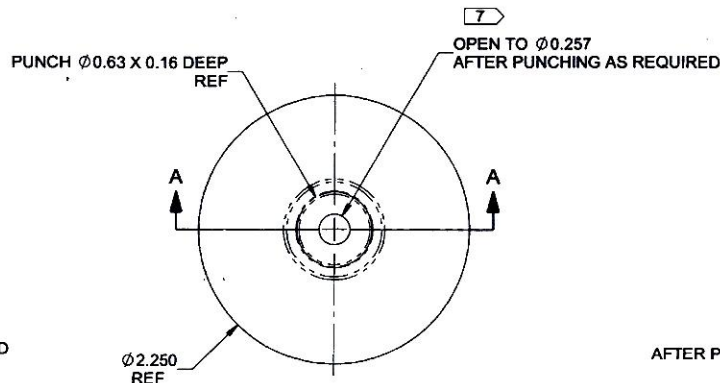
QA Closed: _____ Date: _____

Work Order update only ☐

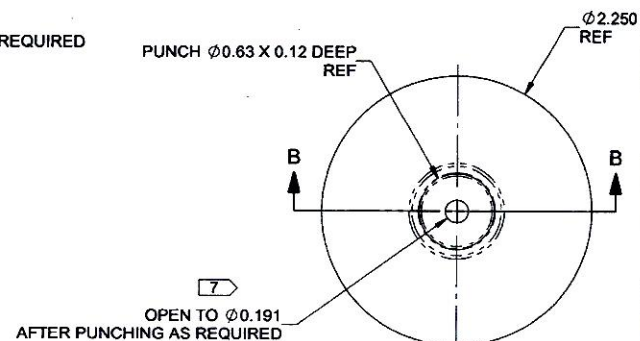
Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
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Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					



D3628-1 CUPPED WASHER



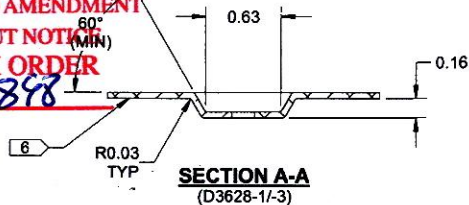
D3628-3 CUPPED WASHER



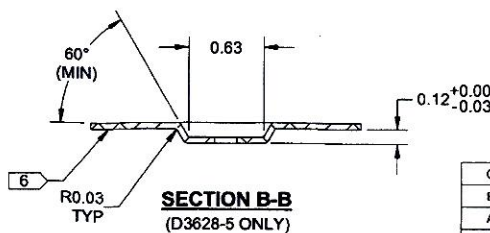
D3628-5 CUPPED WASHER

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 151898

VLS
62
10/18/17



SECTION A-A
(D3628-1/-3)



SECTION B-B
(D3628-5 ONLY)

- NOTES:**
- 1) MATERIAL: MADE FROM D3628-1F
 - 2) FINISH: NONE
 - 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK ALL SHARP EDGES 0.005 TO 0.010 MAX
 - 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.5
 - 7) WHEN DRILLING OUT THE CENTRE HOLE AFTER PUNCHING, ENSURE THAT THE HOLE IS DRILLED CONCENTRIC TO THE CUPPED AREA, WITHIN 0.03
 - 8) WEIGHT: 0.02 lbs

RELEASE
R 2012-05-07

C	UPDATE DWG TO CURRENT STD; ADD -5, ZN C1-1.	DC	12.04.19
B	REMOVE POWDER COAT	CB	07.07.09
A	NEW ISSUE	CB	07.06.08
REV.	DESCRIPTION	BY	DATE
DESIGN	BC	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	BC		
CHECKED	BC	DRAWING NO.	REV. C
MFG. APPR.	BC	D3628	SHEET 1 OF 2
APPROVED	BC	TITLE	SCALE
DE APPR.	BC	CUPPED WASHER	NTS
DATE	12.04.19	COPYRIGHT © 2007 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

DQA: _____ Date: _____

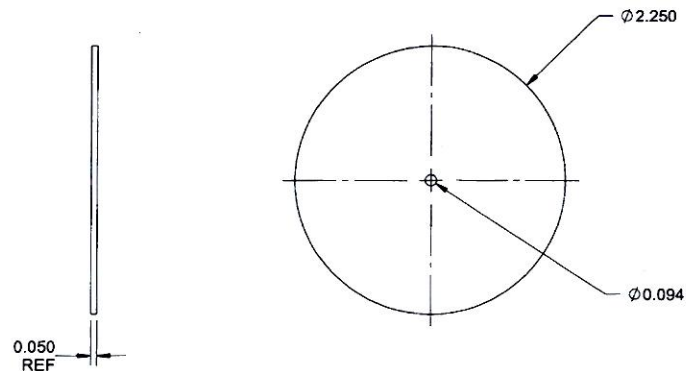


WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval	
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐			
Design ☐	☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐			
Doc/Data ☐	☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐			
Equip/Tooling ☐	☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐			
Handling/Pre ☐	☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐			
Material ☐	☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐			
Internal Transport ☐	☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐			
Tribal Knowledge ☐	☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐			
LOA ☐	☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐			
Substation ☐	☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐			
Past Expiry Date ☐	☐	Manufacturing Process ☐	OTHER :						
Misidentified ☐	☐	Past Due ☐							



D3628-1F FLAT PATTERN

RELEASED
2012-05-07

NOTES:

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL SHEET, 18 GAUGE (0.050 THICK)
ANNEALED, 2B FINISH
PER MIL-S-5059 OR AMS 5513 (304) OR AMS 5524 (316) OR ASTM A240 OR ASME SA240
REF DART SPEC M304S18GA
- 2) FINISH: NONE
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.02 lbs

DESIGN	DC	DART AEROSPACE LTD	
DRAWN	DC	HAWKESBURY, ONTARIO, CANADA	
CHECKED	DC	DRAWING NO.	REV. C
MFG. APPR.	DC	D3628	SHEET 2 OF 2
APPROVED	DC	TITLE	SCALE
DE APPR.	DC	CUPPED WASHER	NTS
DATE	12.04.19	COPYRIGHT © 2007 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD	

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
				Completed By	
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Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID PO34013

Purchase Order Date 10/20/2016

PO Print Date 10/20/2016

Page Number 1 of 2

Order From :

VC-GFI001

Ship To : DART AEROSPACE LTD

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

E-MAILED

OCT 21 2016

GFI
180 AVENUE LABROSSE
POINTE CLAIRE, QC H9R 1A1
CA

Contact Name
Vendor Phone 514 630 4877

Ship To Contact
Ship To Phone
Ship Via: FedEx Economy collect
Ship Acct:

Buyer Chantal Lavoie
Customer POID
Customer Tax # 10127-2607
Terms Net 30
Currency CAD
FOB FCA - (Free Carrier)

Line Nbr	Reference Vendor Part Number Line Comments Delivery Comments	Description/ Mfg ID	Req Date/ Taxable CD Promise Date	Req Qty/ Unit of Measure	PO Unit Price	Extended Price
1	D3628-IP AS PER DWG D3628-REV. C B151898	Cupped Washer	11/15/2016 Yes 11/18/2016 30	500.00 Each	\$2.42	\$1,208.00
Line Total:						\$1,208.00
2	D4735-IP ✓ AS PER DWG D4735-REV. A B151913	Scuff Plate	11/18/2016 Yes 11/18/2016 30	10.00 ✓ Each	\$126.00	\$1,260.00
Line Total:						\$1,260.00

Note:

10/20/2016



180 AVENUE LABROSSE
POINTE-CLAIRE, QC, CANADA H9R 1A1
TÉL.:(514) 630-4877 - FAX:(514) 630-4849

GFI est une division de Thomas & Betts Limitée / GFI is a division of Thomas & Betts Limited



BON DE LIVRAISON / SHIPPING MEMO

DATE DE LIVRAISON / SHIPPING DATE			N° DE BON DE LIVRAISON SHIPPING MEMO NO.	PAGE
JR - DY	MO - MO	AN - YR		
29	11	16	0591629	1/1



VENDU À / SOLD TO

EXPÉDIÉ À / SHIP TO

DART AEROSPACE LTD
1270 ABERDEEN ST.
HAWKESBURY, ON
K6A 1K7

DART AEROSPACE LTD
1270 ABERDEEN ST.
HAWKESBURY, ON
K6A 1K7

CODE DE CLIENT CUSTOMER CODE	N° DE CONTRAT JOB NO.	VOTRE N° DE COMMANDE YOUR PURCHASE ORDER NO.	EXPÉDIÉ PAR SHIP VIA
DART GFI-0299	0325628	PO34013	

QUANTITÉ QUANTITY	N° DE PIÈCE PART NO.	DESCRIPTION
500	D3628-1P	CUPPED WASHER

MFG. JOB# C325628-001 QTY 500

DUE DATE: NOV. 30. 2016



SP/6-12-1

EXPÉDITEUR
SHIPPER

REÇU PAR / RECEIVED BY

DATE

TOUTES LES RÉCLAMATIONS DOIVENT ÊTRE FAITES EN DEDANS DE 5 JOURS DE LA RÉCEPTION.
ALL CLAIMS MUST BE MADE WITHIN 5 DAYS OF RECEIPT OF GOODS.



180 Labrosse Av.
Pointe Claire, QC
H9R 1A1

TO:

DART AEROSPACE LTD
1270 ABERDEEN ST.
HAWKESBURY, ON
K6A 1K7

(CPO) PO#:

PO34013



(POI) ITEM#:

0001



PACKAGE COUNT:

2 OF 2

(PNR) PART NUMBER:

D3628-1P



(SHQ) QUANTITY:

500



PACKAGE WEIGHT:

(UNT) UNIT OF MEASURE:

EA



(PSN) PACKING SLIP #:

0591629



(COO) ORIGIN:

CA



(NAF) NAFTA:



(TRA) TRACEABILITY #:

0325628-001





Intertek

CERTIFICATE OF COMPLIANCE CERTIFICAT DE CONFORMITE



Membre de / A Member of **Thomas&Betts**

180 LABROSSE AVENUE
POINTE CLAIRE, QC
H9R 1A1

DART AEROSPACE LTD
1270 ABERDEEN ST.
HAWKESBURY, ON K6A 1K7

CERTIFICATE NO.	19	OUR JOB NO	0325628	SHIPPING MEMO	0591629	
ITEM	QUANTITY	PURCHASE ORDER	PART NUMBER	REV	NAME	DWG ISSUE
--	500 PCS	PO34013	D3628-1P	C	CUPPED WASHER	C
MATERIAL		SUPPLIED BY		MAT. REL. NO.		
AMS 5513 304 ANN		TW METALS / ATI ROLLED PRODUCTS		H/N # 848467		

	PROCESS	PROCESSOR	RELEASE NOTE #
1	FIRST ARTICLE INSPECTION REPORT ON FILE	GFI	N/A
2	REF. GFI MANUFACTURING JOB NUMBER 0325628-001 (500 PCS)	GFI	N/A
3			
4			
5			
6			
7			
8			
9			

WE HEREBY CERTIFY ALL THE PARTS COVERED BY THIS CERTIFICATE HAVE BEEN MANUFACTURED FROM MATERIAL SUPPLIED ON RELEASE NOTE SHOWN ABOVE AND THAT ALL PARTS HAVE BEEN INDIVIDUALLY INSPECTED AND CONFORM TO THE DRAWINGS AND PURCHASE ORDER REFERENCED ABOVE.

DATE **28 NOVEMBER 2016**

G.F.I. Q.C. REP. 





O'Neal High-Performance Metals Group



Packing
Slip

ORDER NO.: 80817565

FROM: CHIC

PAGE 2

CUST NUMBER: 1203148	NET WGT: 64.512	REQ.DATE: 11/14/16	CONFIRMED
SOLD TO:	SHIP TO:		
GFI INC	GFI INC		
180 AVE. LABROSSE	180 AVE LABROSSE		
POINTE CLAIRE QC	PIONTE CLAIR QC		
CANADA	CN H9R 1A1	CANADA	CN H9R 1A1
SALESPERSON: DEANNA PIMM	SHIP BY:	11/08/16	
TERMS: 1% 10 NET 30	235 TUBEWAY		
F.O.B.: SHIPPING POINT	CAROL STREAM	IL 60188	
CUST ORD NO.: 0088404			
VIA: COM CAR-SPECIF			
FREIGHT: COLLECT			
RELEASE NO.:			
RECEIVING PHONE: 514 630-4877			

"TW Metals MSDS data is available on our web site at www.twmetals.com. MSDS data can be found under the Technical Resources Tab, Product Statistics & Data and the TW Metals MSDS's heading. If you do not have web site access you may telephone 610-458-1300 and we will mail or fax a copy of our current MSDS data to your location."

"CERTIFICATE OF CONFORMANCE"

"TW Metals certifies that the material supplied on this purchase order and contained in the heat/lot number referenced above has been manufactured, inspected, and tested in accordance with the material specification. These records are on file at TW Metals. Packaging material for shipments to Europe and China consists of manufactured wood products and complies with the European emergency measures for coniferous non-manufactured wood packing material"

Authorized Test Report Clerk

Ruth Rogers

Date: 11/08/16

These commodities have been exported from the United States in accordance with the U.S. export control laws, export administrations regulations. Diversion contrary to U.S. law prohibited.



THANK YOU FOR THIS ORDER

TERMS AND CONDITIONS APPLICABLE TO THE SALE OF THESE PRODUCTS ARE SET FORTH ON OUR WEBSITE FOR YOUR CAREFUL REVIEW.
<http://www.twmetals.com/invoice-terms.html>

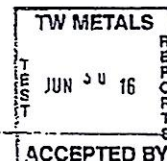
**NOTICE OF SHIPMENT/
PACKING LIST**



CERTIFICATE OF TEST

AL 6168-6 0814

CUST. ORDER NO. & DATE 132794		CUST. CODE 04/11/16 715813	ACCEPTING MILL VANDERGRIFF, PA	SHIPPER NO. 509422	PRODUCT CODE 13020102060000	MILL ORDER NUMBER 30-046-253	DATE SHIPPED 06/13/16
FORMS DISTRIBUTION SOLD TO → 3 SHIP TO → 1 SPEC → 1		REPEAT 007758-2	DD 25	PRI. ORIT	GOV'T. CONTRACT	MAT'L 1121 VANDERGRIFF	SHIPPING LOCATION PA
RELIANCE STEEL-PHOENIX METALS PO BOX 805 4685 BUFORD HIGHWAY NORCROSS GA. 30071		PRIME DSO	SEC. DSO		SHIP TO PHOENIX METALS COMPANY 4685 BUFORD HIGHWAY NORCROSS GA 30071	INVOICE 666544	



ACCEPTED BY *mb*

GRADE AND SPECIFICATIONS CARRIER - WYLIE, E.W. CORPORATION
 "ATI 304" STAINLESS STEEL SHEET C R COILS ANNEALED 2B FIN 3 EDGE (AMS 5513J) (ASME-SA-480 ED 2015)
 (ASTM-A-480-16) (NACE MR0175/ISO 15156-3:10/2009) (ASME-SA-479 ED 2015 CHEM ONLY) (ASTM-A-312-16 CHEM ONLY)
 (ASTM-A-479-16 CHEM ONLY) (ASME-SA-666 ED 2015) (ASME-SA-312 ED 2015 CHEM ONLY) (ASTM-A-666-15) (NACE
 MR0103:2012) (ASTM-A-276-16 CHEM ONLY) (ASME-SA-276 ED 2015 CHEM ONLY) (ASME-SA-240 ED 2015) (EN
 10028-7:2007-1.4301-CR) (ASTM-A-240-15B)

ITEM	PCS	DIMENSIONS W/G/L	HEAT #	COIL #	TEST #	GROSS	TARE	NET	THEO	TAG #/ CD	SKID #
001	1	48././046/2675.	848467	AAB43340-A	8837340	20630		20630		439702	
	1	48././046/2574.	848467	AAB43340-B	8837340	19950		19950		439809	
C CUST IDENTITY 3468-ET		2 COILS				40580		40580			

DIST: EMAIL INVOICES TO DONNA CHAPMAN AT INVOICES@PHOENIXMETALS.NET EMAIL ALL ORDER
 ACKNOWLEDGEMENTS AND SHIPPING NOTICES TO JPERRY@PHOENIXMETALS.NET, VREED@PHOENIXMETALS.NET
 AND MMEISTICKLE@PHOENIXMETALS.NET

TYPE HEAT/TEST (WT %)	C	MN	P	S	SI	CR	NI	MO	CU	N
HEAT 848467	.06	1.06	.038	.0003	.43	18.30	8.10	.57	.51	.06
TEST LOCATION	BN	BN	BN	BN	BN	BN	BN	BN	BN	BN

ITEM TEST NO.	YIELD PSI *	TENSILE PSI	% ELONG IN 2"	% R/A	HARDNESS	BEND	A 262	PR E	SIZE	GRAIN	HARDENABILITY
001 8837340				NR	87.HRBW	T PASS	PASS		NR		NR
TEST LOCATION	T 53600.	101100	52. #		88.HRBW						
	TC	TC	TC		TC	TC	TC				

* Y.S. BY 0.2% OFFSET METHOD

PAGE 01 - CONTINUED ON PAGE 02

06/13/16 08:20:11

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WARNING
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Stephen Wolf
 Director, Corporate Quality Assurance

Stephen Wolf

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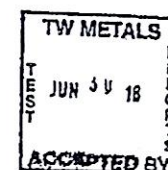
AL 6168-6 0814

CERTIFICATE OF TEST

CUST. ORDER NO. & DATE 132794		04/11/16		CUST. CODE 715813	ACCEPTING MILL VANDERGRIFT, PA	SHIPPER NO. 509422	PRODUCT CODE 13020102060000	MILL ORDER NUMBER 30-046-253	DATE SHIPPED 06/13/16
FORMS DISTRIBUTION SOLD TO 1 SHIP TO SPEC SOLD TO		REPEAT 00794-2		DO 25	PRI- ORITY	GOV'T CONTRACT	MAT'L 1121	SHIPPING LOCATION VANDERGRIFT	PA
RELiance STEEL-PHOENIX METALS PO BOX 805 4685 BUFORD HIGHWAY NORCROSS GA 30071		DSO DSO 514		PHOENIX METALS COMPANY 4685 BUFORD HIGHWAY NORCROSS GA 30071					

GRADE "ATI 304" STAINLESS STEEL SHEET C R COILS ANNEALED 2B FIN 3 EDGE CARRIER - WYLIE, E.W. CORPORATION

ITEM TEST NO	MELT SOURCE	T-YIELD
001 8837340	1.	56643.
TEST LOCATION	TC	
N ELONG AT FRACTURE		



NR = DATA NOT REQUIRED
GRADE VERIFICATION WAS CARRIED OUT SPECTROSCOPICALLY

THESE COMMODITIES OR TECHNOLOGY, WHEN EXPORTED FROM THE UNITED STATES, ARE IN ACCORDANCE WITH THE USA EXPORT ADMINISTRATION REGULATIONS. DIVERSION CONTRARY TO U.S. LAW IS PROHIBITED. U.S. LAW ALSO PROHIBITS ~~DISPOSITION OF THESE COMMODITIES/TECHNICAL DATA TO ANY END-USER OR FOR ANY END-USE RELATED TO THE DESIGN, DEVELOPMENT, PRODUCTION, STOCKPILING, OR USE OF CHEMICAL, BIOLOGICAL, OR NUCLEAR WEAPONS, OR MISSILES, WITHOUT THE PROPER APPROVAL OF THE UNITED STATES GOVERNMENT.~~

MATERIAL WAS SOLUTION ANNEALED AT 1900F (1038C) MINIMUM FOR A TIME COMMENSURATE WITH THICKNESS AND RAPIDLY COOLED WITH AIR AND WATER.

ATI FLAT ROLLED PRODUCTS DOES NOT USE MERCURY IN THE TESTING OR PRODUCTION OF ITS PRODUCTS.

NO WELDS/WELD REPAIRS PERFORMED.

EN 10204:2005 - ATI FLAT ROLLED PRODUCTS IS APPROVED AS A MANUFACTURER ACCORDING TO THE PRESSURE EQUIPMENT DIRECTIVE PED 97/23/EC.



PAGE 02 - CONTINUED ON PAGE 03

06/13/16 08:20:11

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Stephen Wolff
Director, Corporate Quality Assurance

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FORMS DISTRIBUTION 3 SHIP TO → 1 SPEC SOLD TO		REPEAT 007708-2		DO R25	PRI QUALITY	GOV'T. CONTRACT	MAT'L 1121 VANDERGRIFT	SHIPPING LOCATION PA	INVOICE 666544
RELiance STEEL-PHOENIX METALS PO BOX 005 4685 BUFORD HIGHWAY NORCROSS GA 30071		PRIME SEC. DSO DSO 514		PHOENIX METALS COMPANY 4685 BUFORD HIGHWAY NORCROSS GA 30071					

GRADE "ATI 304" STAINLESS STEEL SHEET C R COILS ANNEALED 2B FIN 3 EDGE CARRIER - WYLIE, E.W. CORPORATION

MATERIAL IS COMPLIANT WITH THE EUROPEAN UNION DIRECTIVE 2011/65/EU - RESTRICTION OF HAZARDOUS SUBSTANCES (ROHS2).

MATERIAL MELTED AND ROLLED IN THE UNITED STATES AND COMPLIES WITH DFARS JANUARY 2010 EDITION, SECTION 252.225-7008 AND 252.225-7009, FOR SPECIALTY METALS (JUL 2009).

ATI FLAT ROLLED PRODUCTS HAS AN ACTIVE RADIOACTIVE TESTING PROGRAM WHICH MONITORS INCOMING RAW MATERIALS AS WELL AS MELT SAMPLES FOR EVIDENCE OF RADIOACTIVITY. RAW MATERIAL OR MELT SHOWING RADIATION LEVELS ABOVE NORMAL BACKGROUND ARE NOT PERMITTED TO BE USED.

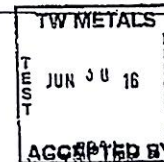
THIS CERTIFIED MATERIAL TEST REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL. FEDERAL LAW PROHIBITS THE RECORDING OF FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THE CERTIFICATE AND MAY BE PUNISHABLE AS A FELONY UNDER FEDERAL LAW. ~~ATI FRP HOLDS SEVERAL QUALITY CERTIFICATIONS THAT INCLUDE~~ ISO-9001, AS9100, NADCAP, AND ISO/IEC 17025. MATERIAL WAS MANUFACTURED IN ACCORDANCE WITH THE ATI FRP QUALITY MANUAL REVISION 24 DATED 10/16/2015.

QUALITY SYSTEM CERTIFIED ACCORDING TO PRESSURE EQUIPMENT DIRECTIVE 97/23/EC, ANNEX I, 4.3 BY TUV SUD, INDUSTRIE SERVICE GMBH, (NOTIFIED BODY 0036).

ATI FLAT ROLLED PRODUCTS PERFORMS CHEMICAL ANALYSIS BY THE FOLLOWING TECHNIQUES FOR TESTING LOCATIONS TC, BN, MI, & LO:

C, S BY COMBUSTION/INFRARED
N, O, H BY INERT FUSION/THERMAL CONDUCTIVITY
MN, P, SI, CR, NI, MO, CU, CB, CO, V BY WDXRF
B BY OES
AL AND TI (>=0.10%) BY WDXRF, OTHERWISE BY OES
PB, BI, AG BY GFAA

PAGE 03 - CONTINUED ON PAGE 04



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SOLD TO →	FORMS DISTRIBUTION 3	SHIP TO →	SPEC 1	REPEAT 000003-2	OD R25	PRI- ORITY	GOV'T. CONTRACT	MATL 1121	SHIPPING LOCATION VANDERGRIFF, PA	INVOICE 666544
RELiance STEEL-PHOENIX METALS PO BOX 805 4485 BUFORD HIGHWAY NORCROSS GA 30071				PRIME SEC. DSO DSO 514		PHOENIX METALS COMPANY 4485 BUFORD HIGHWAY NORCROSS GA 30071				

GRADE "ATI 304" STAINLESS STEEL SHEET C R COILS ANNEALED 2B FIN 3 EDGE CARRIER - WYLIE, E.W. CORPORATION

THE NUMERIC CODES SHOWN UNDER MELT SOURCE CAN BE INTERPRETED AS FOLLOWS:

1. - MATERIAL MELTED, ROLLED AND TESTED IN THE UNITED STATES.
2. - FOREIGN MELT; ROLLED AND TESTED IN THE UNITED STATES.

ATI FLAT ROLLED PRODUCTS HAS NO CONTROL OVER CUSTOMER PROCESSING OF MATERIAL; INCLUDING, BUT NOT LIMITED TO, BUFFING OR ELECTROPOLISHING MATERIAL WITH A 2B OR OTHER FINISH, AND DOES NOT REPRESENT OR GUARANTY THAT THE MATERIAL IS SUITABLE FOR ANY PARTICULAR PROCESS OR USE OF CUSTOMER.

EN 10204:2005 3.1 CERTIFICATE.

TESTING WAS PERFORMED AT THE FOLLOWING LOCATIONS:

BN = ATI-FLAT ROLLED PRODUCTS; 100 RIVER ROAD; BRACKENRIDGE, PA 15014

TC = ATI-FLAT ROLLED PRODUCTS; 1300 PACIFIC AVENUE; NATRONA HEIGHTS, PA 15045

FOR ACCESS TO ONLINE CERTIFICATES OF TEST
REGISTER AT MYATI.ATIMETALS.COM.



TW METALS
JUN 16 16
ACCEPTED BY

PAGE 04 - FINAL PAGE.

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